AMENDED CLAIMS

Claims 1-3, 6-7 (original)
Claims 4-5 (previously presented)
Claims 8-10 (cancelled)

1) A high efficiency motor control, said high efficiency motor control comprising:
a signal input port, said port receiving an input signal;
an output port, said output port for outputting a current to a load;
a variable duty cycle oscillator, said variable duty cycle oscillator providing an alternating current output, whereby said alternating current output is a function of the input signal;
a positive voltage source input port, said positive voltage source input port receiving a direct current positive voltage;
a negative voltage source input port, said negative voltage source input port receiving a direct current negative voltage that is substantially lower than said direct current positive voltage;
a positive switching signal circuit, said positive switching signal circuit receiving the alternating current output, a sample from the positive voltage source input port, a sample from the negative voltage source input port, and a stable input voltage, and outputting a positive supply switching signal, whereby the positive supply switching signal is a function of the alternating current output signal, the sample signal from the positive voltage source input port, and the stable voltage signal. (original)

2) The high efficiency motor control of claim 1, wherein the high efficiency motor control also comprises a positive supply switch, said positive supply switch receiving the positive supply switching signal , and supplying current from the positive voltage source input port to the output port. (original)

3) The high efficiency motor control of claim 1, wherein the high efficiency motor control also comprises a clamping diode, said clamping diode conducting current from the output port to the negative voltage source input port when the voltage at the output port is substantially lower than the voltage at the negative voltage source input port. (original)

4) The high efficiency motor control of claim 1, wherein the high efficiency motor control also comprises a negative switching signal circuit, said negative switching signal circuit receiving a first sample of the output signal from the output port and a negative voltage source reference signal from the negative voltage source input port, and outputting a negative supply switching signal, whereby the negative supply switching signal is a function of the first sample of the output signal and the negative voltage source reference signal;

a negative supply switch, said negative supply switch receiving the negative supply switching signal and conducting current from the output load to the negative voltage source input port. (previously presented)

5) The high efficiency motor control of claim 1, whereby said positive switching signal circuit also receives an error signal and outputs a reference signal. (previously presented)

6) The high efficiency motor control of claim 5, wherein the high efficiency motor control also comprises an output comparator circuit, said comparator circuit receiving a second sample of the output signal, said reference signal and a timing signal and outputting said error signal, whereby said error signal is a function of the second sample of the output signal, said reference signal and said timing signal;

a timing circuit, said timing circuit outputting the timing signal, whereby said timing signal is a function of the error signal. (original)

7) The high efficiency motor control of claim 1, wherein said high efficiency motor control also comprises a charge pump, said charge pump receiving a third sample of the output signal, a second sample signal from the positive voltage source input port and

outputting a supply voltage which is substantially higher than that of the positive voltage source. (original)

8) (cancelled)

9) (cancelled)

10) (cancelled)